

October 3, 1940

Mr. Hugh Fossett  
The Associated Ethyl Company Ltd.,  
The Adelphi  
London, W. C. 2  
England

Dear Mr. Fossett:

Your letter of August 21st raises a series of questions which it is very difficult to answer. We have considered difficulties of this kind under emergencies and have tried to find what could be done toward the disposition of Fluid. I feel that in general your approach to the problem has been quite satisfactory, and I think you are quite right in believing that under the conditions of fire, the Ethyl Fluid would be ignited and in large part completely disposed of.

The greatest danger for the men is that of exposure to vapors, and I believe you will realize that only brief exposures to concentrated vapors will produce acute illness and perhaps fatal illness. The protection which you have suggested against skin contact should be adequate, but a great deal of care will be required to see that any such equipment is kept intact and in good condition. Otherwise any leak or break in the material will be disastrous. The most detailed care should be taken in these matters if and when it is possible, and the men themselves should know how to protect themselves. In this connection it should be remembered that washing tetraethyl off the skin with kerosene is very effective if it is done promptly, but it should be done within fifteen minutes of the time of skin contact or it is likely to be inadequate. As to the vapors, various things suggest themselves, for example, the use of masks, preferably airline masks, or the use of masks containing charcoal if necessary. The canisters on charcoal masks will have to be changed frequently and no trouble or expense should be spared in doing this.

So far as prophylaxis is concerned, I think it will be found that any type of prophylaxis will be largely useless unless indeed there may be some beneficial psychic effect. The method of

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treatment which I suggested in 1925 and which has been cited by Dr. Robertson, is probably valueless, or at least it is certain that it does not work in the way I originally thought that it would. The lead compounds absorbed are released fairly promptly and are excreted in considerable amount. The excretion is not beneficially influenced by the administration of salts which I advised, and the chief benefit of such salts is that they tend to have a mildly cathartic effect and to maintain the salt balance of the body. It may be beneficial and it is not likely to be very useful. In general, however, the program outlined is advantageous. So far as men who have had serious exposure is concerned, they must be kept under medical supervision at all costs. In addition I suggest that Dr. Robertson examine the article published by Dr. Machle on tetraethyl lead since he will find there a rather complete description of the methods of treatment which we are using at the present time, and with fairly good results.

I wish that I could be of a great deal more assistance than this letter indicates. I am afraid, however, that we will have to recognize the general principles of safety measures and apply them in accordance with our best judgment in any situation which may arise.

Sincerely yours,

RAK:ls

Robert A. Kehoe, M.D.

P.S. A "safety manual" recently completed will be available shortly and a copy will be sent to you. A section on emergencies may be useful in this connection. RAK.